REMARKS

Claims 1-15 are all the claims pending in the application. By this Amendment, Applicant amends claims 1 and 5 to further clarify the invention and claims 3 and 6 for conformity therewith. In addition, Applicant adds claims 12-15, which are clearly supported throughout the specification.

I. Preliminary Matter

Applicant thanks the Examiner for acknowledging Applicant's claim to foreign priority and for indicating receipt of the certified copy of the priority document.

II. Summary of the Office Action

The Examiner withdrew the previous rejections. The Examiner, however, found new grounds for rejecting the claims. Claims 1-11 are rejected under 35 U.S.C. § 103(a).

III. Prior Art Rejections

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,229,997 to Hirata (hereinafter "Hirata") in view of newly asserted reference, U.S. Patent No. 6,032,283 to Meyer (hereinafter "Meyer"). Applicant respectfully traverses these grounds of rejection in view of the following comments.

Of these rejected claims, only claims 1 and 5 are independent. Independent claims 1 and 5 *inter alia* and in some variation recite performing a correction of the original signal only when the number of counted errors is lower than the set threshold and setting different thresholds depending on at least one of: whether lines or columns of the original signal are checked and a number of iterative correction.

That is, in an exemplary, non-limiting embodiment of the present invention, introducing additional errors into the original transmitted signal, when the number of faulty signals is higher than the fixed maximum, is prevented. The exemplary FEC decoder detects a number of faulty symbols in the received original signal and when the number exceed a predetermined threshold (fixed maximum), the error correction of the received original signal does not take place. To correct as many errors as possible while not introducing original errors, different thresholds may be set. For example, a first threshold may be set for checking the rows of the original signal and a second threshold different from the first threshold may be set for checking the columns of the original signal. Moreover, different threshold may be set for different iterations. Accordingly, more errors are corrected while new errors are not introduced. It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

As acknowledged by the Examiner, Hirata does not disclose or suggest the above quoted unique features of claims 1 and 5. That is, Hirata deals with synchronizing the local carriers with the frame timing of the transmitted carriers and not with the correction of the original signal (col. 3, line 54 to col. 4, line 8). In Hirata, the correction of the original signal is performed by the conventional decoder, which corrects the original signal and based on the resulting correction, the proper timing of the decoding process is determined (col. 3, lines 15 to 22). Hirata corrects the timing of the decoding process based on the results of the comparison. Hirata does not

disclose or even remotely suggest setting different thresholds depending on whether lines or rows are checked and/or depending on the number of the iteration.

Meyer clearly fails to cure the above-identified deficiency of Hirata. That is, Meyer relates to an improved memory for correcting errors in frames (col. 1, line 53 to col. 2, line 7). In the related art techniques, Meyer discloses a frame having Reed-Solomon code. To perform an error correction in a code corresponding to a row or a column, a syndrome is calculated based on all the code data, including the parity data. Based on this syndrome, the values and positions of the errors can be calculated in a known manner (Fig. 1; col. 1, lines 13 to 35). In Meyer, if the number of errors revealed by a syndrome is a maximum number, it may be preferable not to perform the corresponding corrections as the correction would then be wrong (col. 1, lines 45 to 54). Meyer, however, simply discloses having a maximum number for not performing correction. Meyer does not disclose or suggest different maximum numbers *i.e.*, different thresholds. Furthermore, Meyer does not disclose or even remotely suggest that different thresholds are based on whether a row or a column is being checked and/or based on a number of the corrective iteration.

In addition, one of ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner. The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit from the prior art as a whole, rather than expressly stated. *Id.* Regardless if the USPTO relies on an express or an implicit showing of

motivation, the USPTO is obligated to provide particular findings related to its conclusion, and those findings must be clear and particular.

The Examiner contends that one of ordinary skill in the art would have been motivated to combine the references to "help maintain both the signal quality of communications and low transmission power levels" (*see* page 3 of the Office Action). However, if one of ordinary skill in the art would have combined Hirata and Meyer, then the memory device of Meyer would have been incorporated into the system of Hirata. One of ordinary skill in the art would not have turned to the related art of Meyer to improve the system of Hirata. In addition, the Office Action's general conclusory statement does not satisfy the requirement of providing a clear and particular motivation for the proposed combination. The Examiner has not provided *any objective evidence of record* that would demonstrate that incorporating Meyer's disclosure of corrections into Hirata's conventional decoder maintains "signal quality of communications and low transmission power levels." That is, using a threshold for the correction of code, as disclosed in Meyer, with the alleged comparator of Hirata for the proper timing of the decoding process results in an unworkable combination. In short, a threshold for the counted number of errors during the decoding process cannot be applied to obtain the proper timing of the decoding process. It is Applicant's position that one of ordinary skill in the art would not have been motivated and could not have combined the references in the manner suggested by the Examiner. Furthermore, one of ordinary skill in the art would not have combined these references but to somehow meet the unique features of the claimed invention.

Therefore, "performing a correction of the original signal only when the number of counted errors is lower than the set threshold and setting different thresholds depending on at least one of: whether lines or columns of the original signal are checked and a number of iterative correction," as set forth in some variations in claims 1 and 5. For at least these exemplary reasons, claims 1 and 5 are patentable over Hirata in view of Meyer. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claims 1 and 5. Claims 2-4 and 6-11 are patentable at least by virtue of their dependency on claim 1 or 5.

Dependent claim 3 recites: "the setting an error threshold comprises setting a first error threshold for checking lines of the original signal and a second error threshold for checking columns of the original signal." The Examiner contends that col. 3, lines 31 to 52 of Hirata disclose these unique features of claim 3 (*see* page 3 of the Office Action). As explained above, in Hirata, there is no disclosure of setting the threshold. Moreover, there is no disclosure of setting one threshold for checking lines and another threshold for checking columns of the original signal. Meyer only discloses having a maximum number and fails to disclose or suggest having a threshold for the number of counted errors in a line and another threshold for a number of counted errors in a column. In short, Meyer does not cure the deficient disclosure of Hirata. For at least these additional exemplary reasons, dependent claim 3 is patentable over Hirata in view of Meyer.

IV. New Claims

In order to provide more varied protection, Applicant adds claims 12-15, which are patentable by virtue of their dependency and for additional features set forth therein.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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